SEQUENCE LISTING

<110> McWhirter, John

<120> CELL SURFACE PROTEIN ASSOCIATED WITH HUMAN CHRONIC LYMPHOCYTIC LEUKEMIA

<130> 107 PCT (1087-86 PCT)

<140> PCT/US2004/017118
<141> 2004-06-02

<150> US 60/530,094
<151> 2003-12-15

<150> US 60/475,156
<151> 2003-06-02

<160> 86

<170> PatentIn version 3.2

<210> 1
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<212> PRT
<213> human

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35 40 45

Phe Ala Ala Val Thr Ile Lys Glu Thr Leu Asn Ala Asn Ile Asn Ser
50 55 60

Thr Asn Phe Ala Pro Asp Glu Asn Gln Leu Glu Phe Ile Leu Met Val
65 70 75 80

Leu Ile Pro Leu Ile Leu Leu Val Leu Leu Leu Leu Ser Val Val Phe
85 90 95

Leu Ala Thr Tyr Tyr Lys Arg Lys Arg Thr Lys Gln Glu Pro Ser Ser
100 105 110

Gln Gly Ser Gln Ser Ala Leu Gln Thr Tyr Glu Leu Gly Ser Glu Asn
115 120 125

Val Lys Val Pro Ile Phe Glu Glu Asp Thr Pro Ser Val Met Glu Ile

130 135 140

Glu Met Glu Glu Leu Asp Lys Trp Met Asn Ser Met Asn Arg Asn Ala
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Asp Phe Glu Cys Leu Pro Thr Leu Lys Glu Glu Lys Glu Ser Asn His
165 170 175

Asn Pro Ser Asp Ser Glu Ser
180

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<212> DNA
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ttatgaggaa ttagaaaact caggagatac aactgtggaa tctgaaagac caaataaagt 180

gactattcca agcacatttg ctgcagtgac catcaaagaa acattaaatg caaatataaa 240

ttctaccaac tttgctccgg atgaaaatca gttagagttt atactgatgg tgttaatccc 300

attgatttta ttggtcctct tacttttatc cgtggtattc cttgcaacat actataaaag 360

aaaaagaact aacaagaacc ttctagccaa ggatctcaga gtgctttaca gacatatgaa 420

ctgggaagtg aaaacgtgaa agtccctatt tttgaggaag atacaccctc tgttatggaa 480

attgaaatgg aagagcttga taaatggatg aacagcatga atagaaatgc cgactttgaa 540

tgtttaccta ccttgaagga agagaaggaa tcaaatcaca acccaagtga cagtgaatcc 600

taaacctgaa tggcgctcat gttttccaag agaagcagcc cctgagggag tctgctgagg 660

ctgccaacag gatcc 675

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<212> PRT
<213> murine

<400> 3

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Gly Gln Ser Ser Gln Gly Asn Asp Glu Glu Ser Glu Tyr Ser Gly Gln
20 25 30

Ser Ile Thr Glu Glu Glu Asn Ser Glu Asp Glu Thr Thr Arg Ser Ala

35 40 45

Leu Ala Thr Val Thr Thr Glu Ala Leu Ala Glu Asn Val Asn Ser Thr
50 55 60

His Thr Asn Asp Thr Ser Asn Gln Val Glu Phe Ile Leu Met Val Ala
65 70 75 80

Ile Pro Leu Ala Ala Leu Leu Ile Leu Leu Phe Met Val Leu Ile Ala
85 90 95

Thr Tyr Phe Lys Ser Lys Arg Pro Lys Gln Glu Pro Ser Ser Gln Gly
100 105 110

Ser Gln Ser Ala Leu Gln Thr His Glu Leu Gly Gly Glu Thr Leu Lys
115 120 125

Val Pro Ile Phe Glu Glu Asp Thr Pro Ser Val Met Glu Ile Glu Met
130 135 140

Glu Glu Leu Asp Lys Trp Met Asn Ser Met Asn Arg Asn Ala Asp Tyr
145 150 155 160

Glu Cys Leu Pro Thr Leu Lys Glu Glu Lys Glu Pro Asn Pro Ser Pro
165 170 175

Ser Asp Asn Glu Ser
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<210> 4
<211> 367
<212> PRT
<213> rat

<400> 4

Met Thr Arg Pro Pro Tyr Gln Glu Ala Pro Val Gly Asp Leu Gln Met
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Gly Asp Arg Gln Glu Ser Ser Gly Asp Lys Asp Arg Asn Asp Glu Asp
20 25 30

Ser Glu Tyr Ser Gly His Ser Thr Thr Glu Glu Asp Thr Ala Glu Glu
35 40 45

Glu Thr Thr Arg Ala Leu Ala Thr Val Thr Thr Glu Ala Leu Ala Glu
50 55 60

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Ser Ala Asn Ser Thr His Ile His Gly Thr Ser Asn Gln Val Glu Phe
65                  70                  75                  80

Ile Leu Met Val Ala Val Pro Leu Ala Ala Leu Leu Ile Leu Leu Phe
                85                  90                  95

Ala Ile Leu Ile Val Ile Tyr Phe Lys Ser Arg Arg Pro Lys Gln Glu
            100                 105                 110

Pro Ser Ser Gln Gly Ser Gln Ser Ala Leu Gln Thr Leu Arg Leu Leu
        115                 120                 125

Leu Ser Leu Glu Thr Lys Arg Pro Glu Pro Ser Val Ala Pro Ser Leu
    130                 135                 140

Gly Pro Arg Pro Thr Ile Pro Leu Pro Thr Ala Gln Arg Gly Pro Cys
145                 150                 155                 160

Gln Gln Ser Gly Cys Lys Ala Gly Thr Lys Gly Gly Arg Gln Asp Arg
                165                 170                 175

Gly Glu Asn Glu Met Ala Gly Arg Lys Gly Thr Lys Trp Lys Pro Val
            180                 185                 190

Gly Asn Gly Pro Gly Ala Glu Lys Met Arg Pro Gln Lys Ala Phe Cys
        195                 200                 205

Ser Phe Asn Ala Asp Tyr Gly Ala Ser His Ser Val His Leu Glu His
    210                 215                 220

Phe Gly Asn Gly Phe Leu Asn Phe Ser Ile Ile Cys Met Gln Val Gly
225                 230                 235                 240

Phe Cys Pro Pro Pro Ser Leu Trp Gly Ala Gln Met Arg Val Glu Ile
                245                 250                 255

Arg Ala His Ser Gly Thr Val Glu Pro Leu Ala Val Trp Glu Ile Gly
            260                 265                 270

Gly Glu Val Ala Lys Gln Gly Lys Gly Thr Asp Asp Leu Gly Gly Glu
        275                 280                 285

Thr Leu Lys Val Pro Ile Phe Glu Glu Asp Thr Pro Ser Val Met Glu
    290                 295                 300

Ile Glu Met Glu Glu Leu Asp Lys Trp Met Asn Ser Met Asn Arg Asn
305                 310                 315                 320
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Gly Thr Trp Lys Thr Lys Ala Phe Ala Cys Leu Cys Gly Asn Ala Gly
325 330 335

Leu Asp Gly Cys Leu Cys Phe Ile Ser Asn Ser Glu Asn Leu Lys Leu
340 345 350

Cys Phe Ile Trp His Ser Thr Cys Ala Leu Leu Lys Asp Pro Val
355 360 365

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<213> artificial sequence

<220>
<223> FLJ32028 with an HA epitope tag

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ttatccatat gatgttccag attatgctta tgaggaatta gaaaactcag gagatacaac 180

tgtggaatct gaaagaccaa ataaagtgac tattccaagc acatttgctg cagtgaccat 240

caaagaaaca ttaaatgcaa atataaattc taccaacttt gctccggatg aaaatcagtt 300

agagtttata ctgatggtgt taatcccatt gattttattg gtcctcttac ttttatccgt 360

ggtattcctt gcaacatact ataaaagaaa aagaactaaa caagaacctt ctagccaagg 420

atctcagagt gctttacaga catatgaact gggaagtgaa aacgtgaaag tccctatttt 480

tgaggaagat acaccctctg ttatggaaat tgaaatggaa gagcttgata aatggatgaa 540

cagcatgaat agaaatgccg actttgaatg tttacctacc ttgaaggaag agaaggaatc 600

aaatcacaac ccaagtgaca gtgaatccta aacctgaatg gcgctcatgt tttccaagag 660

aagcagcccc tgagggagtc tgctgaggct gccaacagga tcc 703

<210> 6
<211> 192
<212> PRT
<213> artificial sequence

<220>
<223> FLJ32028 with HA epitope tag

<400> 6

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Val Pro Val Gly Arg Gly Asn Tyr Pro Tyr Asp Val Pro Asp Tyr Ala
20 25 30

Tyr Glu Glu Leu Glu Asn Ser Gly Asp Thr Thr Val Glu Ser Glu Arg
35 40 45

Pro Asn Lys Val Thr Ile Pro Ser Thr Phe Ala Ala Val Thr Ile Lys
50 55 60

Glu Thr Leu Asn Ala Asn Ile Asn Ser Thr Asn Phe Ala Pro Asp Glu
65 70 75 80

Asn Gln Leu Glu Phe Ile Leu Met Val Leu Ile Pro Leu Ile Leu Leu
85 90 95

Val Leu Leu Leu Leu Ser Val Val Phe Leu Ala Thr Tyr Tyr Lys Arg
100 105 110

Lys Arg Thr Lys Gln Glu Pro Ser Ser Gln Gly Ser Gln Ser Ala Leu
115 120 125

Gln Thr Tyr Glu Leu Gly Ser Glu Asn Val Lys Val Pro Ile Phe Glu
130 135 140

Glu Asp Thr Pro Ser Val Met Glu Ile Glu Met Glu Glu Leu Asp Lys
145 150 155 160

Trp Met Asn Ser Met Asn Arg Asn Ala Asp Phe Glu Cys Leu Pro Thr
165 170 175

Leu Lys Glu Glu Lys Glu Ser Asn His Asn Pro Ser Asp Ser Glu Ser
180 185 190

<210> 7
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<212> DNA
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ttatgaggaa ttagaaaact caggagatac aactgtggaa tctgaaagac caaataaagt 180

gactattcca agcacatttg ctgcagtgac catcaaagaa acattaaatg caaatataaa 240

ttctaccaac tttgctccgg atgaaaatca gttagagttt atactgatgg tgttaatccc 300

attgatttta ttggtcctct tacttttatc cgtggtattc cttgcaacat actataaaag 360

aaaaagaact aaacaagaac cttctagcca aggatctcag agtgctttac agacatatga 420

actgggaagt gaaaacgtga aagtccctat ttttgaggaa gatacaccct ctgttatgga 480

aattgaaatg gaagagcttg ataaatggat gaacagcatg aatagaaatg ccgactttga 540

atgtttacct accttgaagg aagagaagga atcaaatcac aacccaagtg acagtgaatc 600

ctatccatat gatgttccag attatgctta aggatcc 637

<210> 8
<211> 192
<212> PRT
<213> artificial sequence

<220>
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<400> 8

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1 5 10 15

Val Pro Val Gly Arg Gly Asn Tyr Glu Glu Leu Glu Asn Ser Gly Asp
20 25 30

Thr Thr Val Glu Ser Glu Arg Pro Asn Lys Val Thr Ile Pro Ser Thr
35 40 45

Phe Ala Ala Val Thr Ile Lys Glu Thr Leu Asn Ala Asn Ile Asn Ser
50 55 60

Thr Asn Phe Ala Pro Asp Glu Asn Gln Leu Glu Phe Ile Leu Met Val
65 70 75 80

Leu Ile Pro Leu Ile Leu Leu Val Leu Leu Leu Leu Ser Val Val Phe
85 90 95

Leu Ala Thr Tyr Tyr Lys Arg Lys Arg Thr Lys Gln Glu Pro Ser Ser
100 105 110

Gln Gly Ser Gln Ser Ala Leu Gln Thr Tyr Glu Leu Gly Ser Glu Asn
115 120 125

Val Lys Val Pro Ile Phe Glu Glu Asp Thr Pro Ser Val Met Glu Ile
130 135 140

Glu Met Glu Glu Leu Asp Lys Trp Met Asn Ser Met Asn Arg Asn Ala
145 150 155 160

Asp Phe Glu Cys Leu Pro Thr Leu Lys Glu Glu Lys Glu Ser Asn His
165 170 175

Asn Pro Ser Asp Ser Glu Ser Tyr Pro Tyr Asp Val Pro Asp Tyr Ala
180 185 190

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<211> 1421
<212> DNA
<213> murine

<220>
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<222> (40)..(40)
<223> n = degenefacy in code

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acctgcagaa accaggccag tctccaaagc tcctgatcta caaagtttcc aaccgatttt 180

ctggggtccc agacaggttc agtggcagtg gatcagggac agatttcaca ctcaagatca 240

gcagagtgga ggctgaggat ctgggagttt attactgctt tcaaggttca catgttccgc 300

tcacgttcgg tgctgggacc aagctggagc tgaaacgggc tgatgctgca ccaactgtat 360

ccatcttccc accatccagt gagcagttaa catccggagg tgcctcagtc gtgtgcttct 420

tgaacaactt ctaccccaaa gacatcaatg tcaagtggaa gattgatggc agtgaacgac 480

aaaatggcgt cctgaacagt tggactgatc aggacagcaa agacagcacc tacagcatga 540

gcagcaccct cacgttgacc aaggacgagt atgaacgaca taacagctat acctgtgagg 600

ccactcacaa gacatcaact tcacccattg tcaagagctt caacaggaat gagtgttaag 660

cggccgcact agatataatt aaggagataa atatgaaata tctgctgccg accgcggcgg 720

cgggcctgct gctgctggcg gcgcagccgg cgatggcgct cgaggtgaag ctggtggagt 780

ctgggggagg cttagtgaag cctggagggt ccctgaaact ctcctgtgca gcctctggat 840

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tcaccatctc cagagataat gccaggaaca tcctgtacct gcaaatgagc agtctgaggt 1020

ctgaggacac ggccatgtat tattgtgtaa gaagtgagac gaactactgg ggccaaggca 1080

ccactctcac agtctcctca gccaaaacga caccccccatc tgtctatcca ctggcccctg 1140

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ccgaaccggt gacggtgtcg tggaactcag gcgctctgac cagcggcgtg cacaccttcc 1260

cggctgtcct acagtcctca ggactctact ccctcagcag cgtggtgacc gtgccatcca 1320

gcagcttggg cacccagacc tacatctgca acgtgaatca caagcccagc aacaccaagg 1380

tggacaagaa agttgagccc aaatcttgtg acaaaactag t 1421

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<211> 474
<212> PRT
<213> murine

<220>
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<222> (14)..(14)
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<223> Xaa = any amino acid

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Asp Gln Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Ile Val His Ser
20 25 30

Asn Gly Asn Thr Tyr Leu Glu Trp Tyr Leu Gln Lys Pro Gly Gln Ser
35 40 45

Pro Lys Leu Leu Ile Tyr Lys Val Ser Asn Arg Phe Ser Gly Val Pro
50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
65 70 75 80

Ser Arg Val Glu Ala Glu Asp Leu Gly Val Tyr Tyr Cys Phe Gln Gly
85 90 95

Ser His Val Pro Leu Thr Phe Gly Ala Gly Thr Lys Leu Glu Leu Lys
100 105 110

Arg Ala Asp Ala Ala Pro Thr Val Ser Ile Phe Pro Pro Ser Ser Glu
115 120 125

Gln Leu Thr Ser Gly Gly Ala Ser Val Val Cys Phe Leu Asn Asn Phe
130 135 140

Tyr Pro Lys Asp Ile Asn Val Lys Trp Lys Ile Asp Gly Ser Glu Arg
145 150 155 160

Gln Asn Gly Val Leu Asn Ser Trp Thr Asp Gln Asp Ser Lys Asp Ser
165 170 175

Thr Tyr Ser Met Ser Ser Thr Leu Thr Leu Thr Lys Asp Glu Tyr Glu
180 185 190

Arg His Asn Ser Tyr Thr Cys Glu Ala Thr His Lys Thr Ser Thr Ser
195 200 205

Pro Ile Val Lys Ser Phe Asn Arg Asn Glu Cys Xaa Ala Ala Ala Leu
210 215 220

Asp Ile Ile Lys Glu Ile Asn Met Lys Tyr Leu Leu Pro Thr Ala Ala
225 230 235 240

Ala Gly Leu Leu Leu Leu Ala Ala Gln Pro Ala Met Ala Leu Glu Val
245 250 255

Lys Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly Ser Leu
260 265 270

Lys Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asp Tyr Ala Met
275 280 285

Ser Trp Val Arg Gln Thr Pro Glu Lys Arg Leu Glu Trp Val Ala Ser
290 295 300

Ile Ser Ser Gly Gly Thr Thr Tyr Tyr Leu Asp Ser Val Lys Gly Arg
305 310 315 320

Phe Thr Ile Ser Arg Asp Asn Ala Arg Asn Ile Leu Tyr Leu Gln Met
325 330 335

Ser Ser Leu Arg Ser Glu Asp Thr Ala Met Tyr Tyr Cys Val Arg Ser
340 345 350

Glu Thr Asn Tyr Trp Gly Gln Gly Thr Thr Leu Thr Val Ser Ser Ala
355 360 365

Lys Thr Thr Pro Pro Ser Val Tyr Pro Leu Ala Pro Gly Ser Ala Ala
370 375 380

Gln Thr Asn Ser Met Ile Thr Leu Gly Cys Leu Val Lys Asp Tyr Phe

385 390 395 400

Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly
405 410 415

Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu
420 425 430

Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr
435 440 445

Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys Lys
450 455 460

Val Glu Pro Lys Ser Cys Asp Lys Thr Ser
465 470

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<211> 1421
<212> DNA
<213> murine

<400> 11
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ggtatctgca gagaccagga caatctcctc agctcctgat ctattttatg tccacccgtg 180

caccaggagt ctcagaccgg tttagtggca ttgggtcagg aacagatttc accctggaaa 240

tcagtagagt gaaggctgag gatgtgggtg tgtattattg tcaacaactt gtagagtatc 300

ctctcacgtt cggtgctggg accaagctgg aactgaaacg ggctgatgct gcaccaactg 360

tatccatctt cccaccatcc agtgagcagt taacatccgg aggtgcctca gtcgtgtgct 420

tcttgaacaa cttctacccc aaagacatca atgtcaagtg gaagattgat ggcagtgaac 480

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tgagcagcac cctcacgttg accaaggacg agtatgaacg acataacagc tatacctgtg 600

aggccactca caagacatca acttcaccca ttgtcaagag cttcaacagg aatgagtgtt 660

aagcggccgc actagatata attaaggaga taaatatgaa atatctgctg ccgaccgcgg 720

cggcgggcct gctgctgctg gcggcgcagc cggcgatggc gctcgaggtc caactgcagc 780

agtctggggc tgagctggtg aggcctgggg cttcagtgac gctgtcctgc aaggcctcgg 840

actacacatt cactgactat gaaatgcact gggtgaagca gacacctgtg catggcctgg 900

aatggattgg aggtattgat cctgaaactg gtggtactgt ctacaatcag aagctcaagg 960

gcaaggccac actgactgca gacaaagcct ccagcacggc ctacatggag ctccgaagcc 1020

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ccgaaccggt gacggtgtcg tggaactcag gcgctctgac cagcggcgtg cacaccttcc 1260

cggctgtcct acagtcctca ggactctact ccctcagcag cgtggtgacc gtgccatcca 1320

gcagcttggg cacccagacc tacatctgca acgtgaatca caagcccagc aacaccaagg 1380

tggacaagaa agttgagccc aaatcttgtg acaaaactag t 1421

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<211> 472
<212> PRT
<213> murine

<400> 12

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Glu Ser Val Ser Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu Tyr Lys
20 25 30

Asp Gly Lys Thr Tyr Leu Asn Trp Tyr Leu Gln Arg Pro Gly Gln Ser
35 40 45

Pro Gln Leu Leu Ile Tyr Phe Met Ser Thr Arg Ala Pro Gly Val Ser
50 55 60

Asp Arg Phe Ser Gly Ile Gly Ser Gly Thr Asp Phe Ile Leu Glu Ile
65 70 75 80

Ser Arg Val Lys Ala Glu Asp Val Gly Val Tyr Tyr Cys Gln Gln Leu
85 90 95

Val Glu Tyr Pro Leu Thr Phe Gly Ala Gly Thr Lys Leu Glu Leu Lys
100 105 110

Arg Ala Asp Ala Ala Pro Thr Val Ser Ile Phe Pro Pro Ser Ser Glu
115 120 125

Gln Leu Thr Ser Gly Gly Ala Ser Val Val Cys Phe Leu Asn Asn Phe
130 135 140

Tyr Pro Lys Asp Ile Asn Val Lys Trp Lys Ile Asp Gly Ser Glu Arg
145 150 155 160

Gln Asn Gly Val Leu Asn Ser Trp Thr Asp Gln Asp Ser Lys Asp Ser
165 170 175

Thr Tyr Ser Met Ser Ser Thr Leu Thr Leu Thr Lys Asp Glu Tyr Glu
180 185 190

Arg His Asn Ser Tyr Thr Cys Glu Ala Thr His Lys Thr Ser Thr Ser
195 200 205

Pro Ile Val Lys Ser Phe Asn Arg Asn Glu Cys Ala Ala Ala Leu Asp
210 215 220

Ile Ile Lys Glu Ile Asn Met Lys Tyr Leu Leu Pro Thr Ala Ala Ala
225 230 235 240

Gly Leu Leu Leu Leu Ala Ala Gln Pro Ala Met Ala Leu Glu Val Gln
245 250 255

Leu Gln Gln Ser Gly Ala Glu Leu Val Arg Pro Gly Ala Ser Val Thr
260 265 270

Leu Ser Cys Lys Ala Ser Asp Tyr Thr Phe Thr Asp Tyr Glu Met His
275 280 285

Trp Val Lys Gln Thr Pro Val His Gly Leu Glu Trp Ile Gly Gly Ile
290 295 300

Asp Pro Glu Thr Gly Gly Thr Val Tyr Asn Gln Lys Leu Lys Gly Lys
305 310 315 320

Ala Thr Leu Thr Ala Asp Lys Ala Ser Ser Thr Ala Tyr Met Glu Leu
325 330 335

Arg Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys Thr Ala Gly
340 345 350

Val Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ala Ala Lys Thr
355 360 365

Thr Ala Pro Ser Val Tyr Pro Leu Ala Pro Val Cys Gly Asp Thr Thr
370 375 380

Gly Ser Ser Met Thr Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu
385 390 395 400

Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His

405 410 415

Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser
420 425 430

Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys
435 440 445

Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu
450 455 460

Pro Lys Ser Cys Asp Lys Thr Ser
465 470

<210> 13
<211> 108
<212> PRT
<213> murine

<400> 13

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Asp Arg Val Thr Ile Ser Cys Arg Thr Ser Gln Asp Ile Ser Asn Tyr
20 25 30

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35 40 45

Tyr Tyr Thr Ser Arg Leu His Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Tyr Ser Leu Thr Ile Asn Asn Leu Glu Gln
65 70 75 80

Glu Asp Ile Ala Thr Tyr Phe Cys Gln Gln Gly Asn Thr Leu Pro Phe
85 90 95

Thr Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys Arg
100 105

<210> 14
<211> 113
<212> PRT
<213> murine

<400> 14

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Glu Ser Val Ser Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu Tyr Lys
20 25 30

Asp Gly Lys Thr Tyr Leu Asn Trp Tyr Leu Gln Arg Pro Gly Gln Ser
35 40 45

Pro Gln Leu Leu Ile Tyr Phe Met Ser Thr Arg Ala Pro Gly Val Ser
50 55 60

Asp Arg Phe Ser Gly Ile Gly Ser Gly Thr Asp Phe Thr Leu Glu Ile
65 70 75 80

Ser Arg Val Lys Ala Glu Asp Val Gly Val Tyr Tyr Cys Gln Gln Leu
85 90 95

Val Glu Tyr Pro Leu Thr Phe Gly Ala Gly Thr Lys Leu Glu Leu Lys
100 105 110

Arg

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Asp Ile Val Met Thr Gln Ser Pro Ser Ser Leu Ala Val Ser Val Gly
1 5 10 15

Glu Lys Val Thr Met Ser Cys Lys Ser Ser Gln Ser Leu Leu Tyr Ser
20 25 30

Ser Asn Gln Lys Asn Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln
35 40 45

Ser Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val
50 55 60

Pro Asp Arg Phe Thr Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr
65 70 75 80

Ile Ser Ser Val Lys Ala Glu Asp Leu Ala Val Tyr Tyr Cys Gln Gln
85 90 95

Tyr Tyr Ser Tyr Pro Leu Thr Phe Gly Ala Gly Thr Lys Leu Glu Leu
100 105 110

Lys Arg

<210> 16
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Asp Ile Val Met Ser Gln Ser Pro Ser Ser Leu Ala Val Ser Val Gly
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Glu Lys Val Thr Met Ser Cys Lys Ser Ser Gln Ser Leu Leu Tyr Ser
20 25 30

Ser Asn Gln Lys Asn Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln
35 40 45

Ser Pro Lys Leu Leu Ile Tyr Trp Ala Ser Ala Arg Gly Ser Gly Val
50 55 60

Pro Asp Arg Phe Thr Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr
65 70 75 80

Ile Ser Ser Val Lys Ala Glu Asp Leu Ala Val Tyr Tyr Cys Gln Gln
85 90 95

Tyr Tyr Ser Tyr Pro Leu Thr Ile Gly Ala Gly Thr Lys Leu Glu Leu
100 105 110

Lys Arg

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<211> 113
<212> PRT
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<400> 17

Asp Val Val Met Thr Gln Thr Pro Leu Ser Leu Pro Val Ser Leu Gly
1 5 10 15

Asp Gln Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Ile Val His Ser
20 25 30

Asn Gly Asn Thr Tyr Leu Glu Trp Tyr Leu Gln Lys Pro Gly Gln Ser
35 40 45

Pro Lys Leu Leu Ile Tyr Lys Val Ser Asn Arg Phe Ser Gly Val Pro
50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
65 70 75 80

Ser Arg Val Glu Ala Glu Asp Leu Gly Val Tyr Tyr Cys Phe Gln Gly
85 90 95

Ser His Val Pro Leu Thr Phe Gly Ala Gly Thr Lys Leu Glu Leu Lys
100 105 110

Arg

<210> 18
<211> 113
<212> PRT
<213> murine

<400> 18

Leu Glu Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Val Arg Pro Gly
1 5 10 15

Ala Ser Val Thr Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asp
20 25 30

Tyr Glu Met His Trp Val Lys Gln Thr Pro Val His Gly Leu Glu Trp
35 40 45

Ile Gly Gly Ile Asp Pro Glu Ile Gly Gly Thr Val Tyr Asn Gln Lys
50 55 60

Phe Lys Gly Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Gly Thr Ala
65 70 75 80

Tyr Met Glu Leu Arg Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr
85 90 95

Cys Thr Ser Phe Ala Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser
100 105 110

Ala

<210> 19
<211> 113
<212> PRT
<213> murine

<400> 19

Leu Glu Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Val Arg Pro Gly
1 5 10 15

Ala Ser Val Thr Leu Ser Cys Lys Ala Ser Asp Tyr Thr Phe Thr Asp
20 25 30

Tyr Glu Met His Trp Val Lys Gln Thr Pro Val His Gly Leu Glu Trp
35 40 45

Ile Gly Gly Ile Asp Pro Glu Thr Gly Gly Thr Val Tyr Asn Gln Lys
50 55 60

Leu Lys Gly Lys Ala Thr Leu Thr Ala Asp Lys Ala Ser Ser Thr Ala
65 70 75 80

Tyr Met Glu Leu Arg Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr
85 90 95

Cys Thr Ala Gly Val Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser
100 105 110

Ala

<210> 20
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<400> 20

Leu Glu Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Val Arg Pro Gly
1 5 10 15

Ala Ser Val Thr Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asp
20 25 30

Tyr Glu Val His Trp Val Lys Gln Thr Pro Val Gln Gly Leu Asp Trp
35 40 45

Ile Gly Gly Ile Asp Pro Glu Ser Gly Gly Thr Ala Tyr Asn Gln Lys
50 55 60

Phe Lys Gly Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Arg Thr Ala
65 70 75 80

Tyr Met Glu Leu Arg Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr
85 90 95

Cys Thr Ala Gly Ala Asp Trp Gly Gln Gly Thr Leu Val Thr Val Phe
100 105 110

Ala

<210> 21
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<400> 21

Leu Glu Val Gln Leu Lys Gln Ser Gly Ala Glu Leu Val Lys Pro Gly
1 5 10 15

Ala Ser Val Lys Leu Ser Cys Thr Ala Ser Gly Phe Asn Ile Lys Asp
20 25 30

Thr Tyr Ile Asn Trp Val Lys Gln Arg Pro Glu Gln Gly Leu Glu Trp
35 40 45

Ile Gly Arg Ile Asp Pro Ala Asn Asn Asn Thr Asn Tyr Asp Pro Lys
50 55 60

Phe Gln Gly Lys Ala Thr Ile Thr Ala Asp Thr Pro Ser Asn Thr Ala
65 70 75 80

Tyr Leu Gln Leu Ser Ser Leu Thr Ser Glu Asp Thr Asp Val Tyr Tyr
85 90 95

Cys Val Ser Gly Gly Tyr Phe Asp Tyr Trp Gly Gln Gly Thr Thr Leu
100 105 110

Thr Val Ser Ser
115

<210> 22
<211> 116
<212> PRT
<213> murine

<400> 22

Leu Glu Val Gln Leu Gln Gln Ser Gly Ala Glu Phe Val Arg Pro Gly
1 5 10 15

Ala Ser Val Lys Leu Ser Cys Thr Gly Ser Gly Phe Asn Ile Lys Asp
20 25 30

Thr Tyr Met Asn Trp Val Ile Gln Arg Pro Glu Gln Gly Leu Glu Trp
35 40 45

Ile Gly Met Ile Asp Pro Ala Asn Gly Asn Thr Gln Tyr Asp Pro Lys
50 55 60

Phe Gln Gly Lys Ala Thr Ile Thr Ala Asp Thr Ser Ser Asn Thr Ala
65 70 75 80

Tyr Leu Gln Leu Ser Ser Leu Thr Ser Glu Asp Thr Ala Val Tyr Tyr
85 90 95

Cys Thr Ser Gly Gly Tyr Phe Asp Tyr Trp Gly Gln Gly Thr Thr Leu
100 105 110

Thr Val Ser Ser
115

<210> 23
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<212> PRT
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<400> 23

Leu Glu Val Lys Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly
1 5 10 15

Gly Ser Leu Lys Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asp
20 25 30

Tyr Ala Met Ser Trp Val Arg Gln Thr Pro Glu Lys Arg Leu Glu Trp
35 40 45

Val Ala Ser Ile Ser Ser Gly Gly Thr Thr Tyr Tyr Leu Asp Ser Val
50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Arg Asn Ile Leu Tyr
65 70 75 80

Leu Gln Met Ser Ser Leu Arg Ser Glu Asp Thr Ala Met Tyr Tyr Cys
85 90 95

Val Arg Ser Glu Thr Asn Tyr Trp Gly Gln Gly Thr Thr Leu Thr Val
100 105 110

Ser Ser

<210> 24
<211> 120
<212> PRT
<213> murine

<400> 24

Leu Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Lys
1 5 10 15

Gly Ser Leu Lys Leu Ser Cys Ala Ala Ser Gly Phe Asn Phe Asn Thr
20 25 30

Tyr Ala Met Asn Trp Val Arg Gln Ser Pro Gly Lys Gly Leu Glu Trp
35 40 45

Val Ala Arg Ile Arg Thr Lys Ser Asn Asn Tyr Ala Thr Tyr Tyr Ala
50 55 60

Asp Ser Val Lys Asp Arg Phe Ser Val Ser Arg Asp Asp Ser Gln Ser
65 70 75 80

Met Leu Tyr Leu Gln Met Asn Asn Leu Lys Thr Glu Asp Thr Ala Met
85 90 95

Tyr Tyr Cys Val Arg His Glu Gly Asp Trp Phe Ala Tyr Trp Gly Gln
100 105 110

Gly Thr Leu Val Thr Val Ser Glu
115 120

<210> 25
<211> 120
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<400> 25

Leu Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Lys
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Gly Ser Leu Lys Leu Ser Cys Ala Ala Ser Gly Phe Asn Phe Asn Thr
20 25 30

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Tyr Ala Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp
        35                  40                  45

Val Ala Arg Ile Arg Ser Lys Ser Asn Asn Tyr Ala Thr Tyr Tyr Ala
    50                  55                  60

Asp Ser Val Lys Asp Arg Phe Thr Ile Ser Arg Asp Asp Ser Gln Ser
65                  70                  75                  80

Met Leu Tyr Leu Gln Met Asn Asn Leu Lys Thr Glu Asp Thr Ala Met
                85                  90                  95

Tyr Tyr Cys Val Arg His Glu Gly Asp Trp Phe Ala Tyr Trp Gly Gln
            100                 105                 110

Gly Thr Leu Val Thr Val Ser Ala
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Gly Ser Leu Lys Leu Ser Cys Ala Ala Ser Gly Phe Asn Phe Asn Thr
            20                  25                  30

Tyr Ala Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp
        35                  40                  45

Val Ala Arg Ile Arg Ser Lys Ser Asn Asn Tyr Ala Thr Tyr Tyr Ala
    50                  55                  60

Asp Ser Val Lys Asp Arg Phe Thr Ile Ser Arg Asp Asp Ser Gln Ser
65                  70                  75                  80

Met Leu Tyr Leu Gln Met Asn Asn Leu Lys Thr Glu Asp Thr Ala Met
                85                  90                  95

Tyr Tyr Cys Val Arg His Glu Gly Asp Trp Phe Ala Tyr Trp Gly Gln
            100                 105                 110

Gly Thr Leu Val Thr Val Ser Ala
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115 120

<210> 27
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Leu Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Lys
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Gly Ser Leu Lys Leu Ser Cys Ala Ala Ser Gly Phe Asn Phe Asn Thr
20 25 30

Tyr Ala Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp
35 40 45

Val Ala Arg Ile Arg Ser Lys Ser Asn Asn Tyr Ala Thr Tyr Tyr Ala
50 55 60

Asp Ser Val Lys Asp Arg Phe Thr Ile Ser Arg Asp Asp Ser Gln Ser
65 70 75 80

Met Leu Tyr Leu Gln Met Asn Asn Leu Lys Thr Glu Asp Thr Ala Met
85 90 95

Tyr Tyr Cys Val Arg His Glu Gly Asn Trp Phe Ala Tyr Trp Gly Gln
100 105 110

Gly Thr Leu Val Thr Val Ser Ala
115 120

<210> 28
<211> 116
<212> PRT
<213> murine

<400> 28

Leu Glu Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Ala Lys Pro Gly
1 5 10 15

Ala Ser Val Lys Met Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn
20 25 30

Ser Trp Ile His Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp
35 40 45

Ile Gly Tyr Ile His Pro Gly Pro Gly Tyr Thr Glu Tyr Asn Gln Asn

50 55 60

Phe Lys Asp Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Ser Thr Ala
65 70 75 80

Tyr Ile Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr
85 90 95

Cys Ile Arg Gly Gly Asp Trp Gly Tyr Trp Gly Gln Gly Thr Ser Val
100 105 110

Thr Val Ser Ser
115

<210> 29
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<400> 29

Leu Glu Val Gln Leu Lys Gln Ser Gly Ala Glu Leu Val Lys Pro Gly
1 5 10 15

Ala Ser Val Lys Leu Ser Cys Thr Ala Ser Gly Phe Asn Ile Lys Asp
20 25 30

Thr Tyr Met Asn Trp Val Lys Gln Arg Pro Glu Gln Gly Leu Glu Trp
35 40 45

Ile Gly Gly Ile Asp Pro Ala Asn Asp Asn Thr Glu Tyr Val Pro Lys
50 55 60

Phe Gln Gly Arg Ala Thr Ile Thr Ala Asp Thr Ser Ser Asn Thr Ala
65 70 75 80

Tyr Leu Gln Leu Arg Ser Leu Thr Ser Asp Asp Thr Ala Val Tyr Tyr
85 90 95

Cys Val Thr Gly Gly Tyr Phe Asp Tyr Trp Gly Gln Gly Thr Thr Leu
100 105 110

Thr Val Ser Ser
115

<210> 30
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Leu Glu Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Val Lys Pro Gly
1 5 10 15

Ala Ser Val Lys Leu Ser Cys Thr Ala Ser Gly Phe Asn Ile Lys Asp
20 25 30

Thr Tyr Met Asn Trp Val Lys Gln Arg Pro Glu Gln Gly Leu Glu Trp
35 40 45

Ile Gly Gly Ile Asp Pro Ala Asn Asp Asn Thr Glu Tyr Val Pro Lys
50 55 60

Phe Gln Gly Arg Ala Thr Ile Thr Ala Asp Thr Ser Ser Asn Thr Ala
65 70 75 80

Tyr Leu Gln Leu Arg Ser Leu Thr Ser Asp Asp Thr Ala Val Tyr Tyr
85 90 95

Cys Val Thr Gly Gly Tyr Phe Asp Tyr Trp Gly Gln Gly Thr Thr Leu
100 105 110

Thr Val Ser Ser
115

<210> 31
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Leu Glu Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Val Arg Pro Gly
1 5 10 15

Ala Ser Val Thr Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asp
20 25 30

Tyr Glu Met His Trp Val Lys Gln Thr Pro Val His Gly Leu Glu Trp
35 40 45

Ile Gly Gly Ile Asp Pro Glu Thr Gly Gly Thr Val Tyr Asn Gln Lys
50 55 60

Phe Lys Gly Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Ser Thr Ala
65 70 75 80

Tyr Met Glu Leu Arg Ser Gln Thr Ser Glu Asp Ser Ala Val Tyr Tyr
85 90 95

Cys Thr Arg Trp Asp Tyr Trp Gly Gln Gly Thr Thr Leu Thr Val Ser
100 105 110

Ser

<210> 32
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Leu Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Lys
1 5 10 15

Gly Ser Leu Lys Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Asn Thr
20 25 30

Tyr Ala Met Asn Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp
35 40 45

Val Ala Arg Ile Arg Thr Lys Ser Asn Asn Tyr Ala Thr Tyr Tyr Ala
50 55 60

Asp Ser Val Lys Asp Arg Phe Thr Ile Ser Arg Asp Asp Ser Gln Ser
65 70 75 80

Met Leu Tyr Leu Gln Met Asn Asn Leu Lys Thr Glu Asp Thr Ala Thr
85 90 95

Tyr Tyr Cys Val Arg Gln Gly Glu Asn Arg Phe Ala Tyr Trp Gly Gln
100 105 110

Gly Thr Leu Val Thr Val Ser Ala
115 120

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Leu Glu Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Val Arg Pro Gly
1 5 10 15

Ala Ser Val Thr Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asp
20 25 30

Tyr Glu Met His Trp Val Lys Gln Thr His Val His Gly Leu Glu Trp
35 40 45

Ile Gly Gly Ile Asp Pro Glu Thr Gly Gly Thr Val Tyr Asn Gln Lys
50 55 60

Phe Lys Gly Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Ser Thr Ala
65 70 75 80

Tyr Met Glu Leu Arg Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr
85 90 95

Cys Thr Ser Ser Leu Pro Trp Gly Gln Gly Thr Leu Val Thr Val Ser
100 105 110

Ala

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Gln Ser Ile Val His Ser Asn Gly Asn Thr Tyr
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Asp Tyr Thr Phe Thr Asp Tyr Glu Met His
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Gly Phe Asn Ile Lys Asp Thr Tyr Ile Asn
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Gly Phe Thr Phe Ser Asp Tyr Ala Met Ser

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Tyr Thr Ser
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Gly

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Gly Ile Asp Pro Glu Thr Gly Gly Thr Val Tyr Asn Gln Lys Leu Lys
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Gly

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Gly Ile Asp Pro Glu Ser Gly Gly Thr Ala Tyr Asn Gln Lys Phe Lys
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Gly

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Arg Ile Asp Pro Ala Asn Asn Asn Thr Asn Tyr Asp Pro Lys Phe Gln
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Gly

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Ser Ile Ser Ser Gly Gly Thr Thr Tyr Tyr Leu Asp Ser Val Lys Gly
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Val Lys Asp

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Val Lys Asp

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Tyr Ile His Pro Gly Pro Gly Tyr Thr Glu Tyr Asn Gln Asn Phe Lys
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Asp

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Gly Ile Asp Pro Ala Asn Asp Asn Thr Glu Tyr Val Pro Lys Phe Gln
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Gly

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Arg Ile Arg Thr Lys Ser Asn Asn Tyr Ala Thr Tyr Tyr Ala Asp Ser
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Val Lys Asp

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Gly Ile Asp Pro Glu Thr Gly Gly Thr Val Tyr Asn Gln Lys Phe Lys
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Gln Gln Gly Asn Thr Leu Pro Phe Thr Phe Gly Ser Gly
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Gln Gln Leu Val Glu Tyr Pro Leu Thr Phe Gly Ala Gly
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Gln Gln Tyr Tyr Ser Tyr Pro Leu Thr Phe Gly Ala Gly
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Gln Gln Tyr Tyr Ser Tyr Pro Leu Thr Ile Gly Ala Gly
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Phe Gln Gly Ser His Val Pro Leu Thr Phe Gly Ala Gly
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Phe Ala Tyr
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Gly Gly Tyr Phe Asp Tyr
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Ser Glu Thr Asn Tyr
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His Glu Gly Asp Trp Phe Ala Tyr
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His Glu Gly Asn Trp Phe Ala Tyr
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Gly Gly Asp Trp Gly Tyr
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Gly Gly Tyr Phe Asp Tyr
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Trp Asp Tyr
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Gln Gly Glu Asn Arg Phe Ala Tyr
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ggaattagaa aactcaggag atacaactgt ggaatctgaa agaccaaata aagtgactat 180

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agtgaaaacg tgaaagtccc tatttttgag gaagatacac cctctgttat ggaaattgaa 480

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Val Pro Val Gly Arg Gly Asn Tyr Glu Glu Leu Glu Asn Ser Gly Asp
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Thr Thr Val Glu Ser Glu Arg Pro Asn Lys Val Thr Ile Pro Ser Thr
35 40 45

Phe Ala Ala Val Thr Ile Lys Thr Leu Asn Ala Asn Ile Asn Ser Thr
50 55 60

Asn Phe Ala Pro Asp Glu Asn Gln Leu Glu Phe Ile Leu Met Val Leu
65 70 75 80

Ile Pro Leu Ile Leu Leu Val Leu Leu Leu Leu Ser Val Val Phe Leu
85 90 95

Ala Thr Tyr Tyr Lys Arg Lys Arg Thr Lys Gln Glu Pro Ser Ser Gln
100 105 110

Gly Ser Gln Ser Ala Leu Gln Thr Tyr Glu Leu Gly Ser Glu Asn Val
115 120 125

Lys Val Pro Ile Phe Glu Glu Asp Thr Pro Ser Val Met Glu Ile Glu
130 135 140

Met Glu Glu Leu Asp Lys Trp Met Asn Ser Met Asn Arg Asn Ala Asp
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Pro Ser Asp Ser Glu Ser
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<223> Xaa = any amino acid

<400> 85

Met Thr Xaa Pro Xaa Ala Ala Leu Val Xaa Ala Leu Xaa Xaa Ala Xaa
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Xaa Gln Xaa Ser Xaa Gly Asn Asp Glu Glu Ser Glu Tyr Ser Gly Xaa
20 25 30

Ser Thr Thr Glu Glu Glu Xaa Xaa Glu Xaa Glu Thr Thr Arg Ser Ala
35 40 45

Leu Ala Thr Val Thr Thr Glu Ala Leu Ala Glu Asn Xaa Asn Ser Thr
50 55 60

His Xaa Xaa Xaa Thr Ser Asn Gln Val Glu Phe Ile Leu Met Val Ala
65 70 75 80

Ile Pro Leu Ala Ala Leu Leu Ile Leu Leu Phe Xaa Val Leu Ile Ala
85 90 95

Thr Tyr Phe Lys Ser Lys Arg Pro Lys Gln Glu Pro Ser Ser Gln Gly
100 105 110

Ser Gln Ser Ala Leu Gln Thr Xaa Glu Leu Gly Gly Glu Thr Leu Lys
115 120 125

Val Pro Ile Phe Glu Glu Asp Thr Pro Ser Val Met Glu Ile Glu Met
130 135 140

Glu Glu Leu Asp Lys Trp Met Asn Ser Met Asn Arg Asn Ala Asp Phe

145 150 155 160

Glu Cys Leu Pro Thr Leu Lys Glu Glu Lys Glu Xaa Asn Xaa Xaa Pro
165 170 175

Ser Asp Ser Glu Ser
180

<210> 86
<211> 120
<212> PRT
<213> murine

<400> 86

Leu Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Lys
1 5 10 15

Gly Ser Leu Lys Leu Ser Cys Ala Ala Ser Gly Phe Asn Phe Asn Thr
20 25 30

Tyr Ala Met Asn Trp Val Arg Gln Ser Pro Gly Lys Gly Leu Glu Trp
35 40 45

Val Ala Arg Ile Arg Thr Lys Ser Asn Asn Tyr Ala Thr Tyr Tyr Ala
50 55 60

Asp Ser Val Lys Asp Arg Phe Ser Val Ser Arg Asp Asp Ser Gln Ser
65 70 75 80

Met Leu Tyr Leu Gln Met Asn Asn Leu Lys Thr Glu Asp Thr Ala Met
85 90 95

Tyr Tyr Cys Val Arg His Glu Gly Asp Trp Phe Ala Tyr Trp Gly Gln
100 105 110

Gly Thr Leu Val Thr Val Ser Glu
115 120